Met Office in the Media: 31 August 2010

Description

The Times ran a number of articles over the weekend in the Weather Eye feature looking at the North Atlantic Hurricane Season. Julian Heming, tropical storm expert at the Met Office briefed Paul Simons explaining the quiet start to the Hurricane season and highlighting a move to a more active spell in the next week or so as Danielle, Earl and Fiona all line up. Jyotika's Tropical Storm Blog give's some more information on this.

The Daily Telegraph reports on the largely fine weather that was forecast and enjoyed over the Bank Holiday weekend. With high pressure sticking around for a couple more days yet it looks like we well see some fine weather for the end of the school holidays in England and Wales.

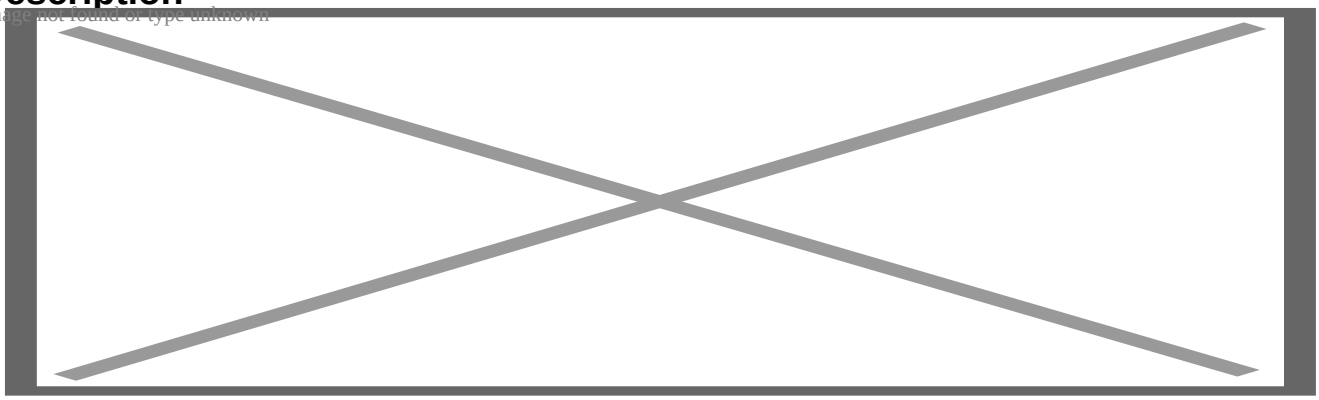
Related Articles

- FACTBOX-Forecasts for 2010 Atlantic hurricane season (reuters.com)

Date Created
August 2010

Weather set to improve next week

Description



The weather is set to improve for most as we head through the Bank holiday weekend and in to next week, with more settled conditions spreading from the south and west.

Our forecasts show that it is likely to stay rather mixed on Saturday and Sunday with some bright or sunny spells, but also the chance of some rain, especially in the north and east where there may be a chilly wind.

However, Bank Holiday Monday looks set to be mainly dry with some sunny spells for much of England and Wales. Some showers are possible, mainly in the north and east where it may stay rather breezy. This fine spell is expected to last into next week.

Met Office Chief Forecaster, Martin Young, said: “Following the wet weather parts of England and Wales have seen over the last few days, it looks like we will see an improvement for Bank Holiday Monday and the final week of the school holidays. The best day of the weekend is likely to be Monday with some warm sunshine in the west.”

A spokesperson for the RAC said: “The RAC predicts that with improving weather and so many events taking place up and down the country, the roads are going to be extremely busy over the bank holiday weekend. It’s really important that people plan their routes before setting off to avoid any congestion and get the best out of their extended break.”

Date Created
August 2010

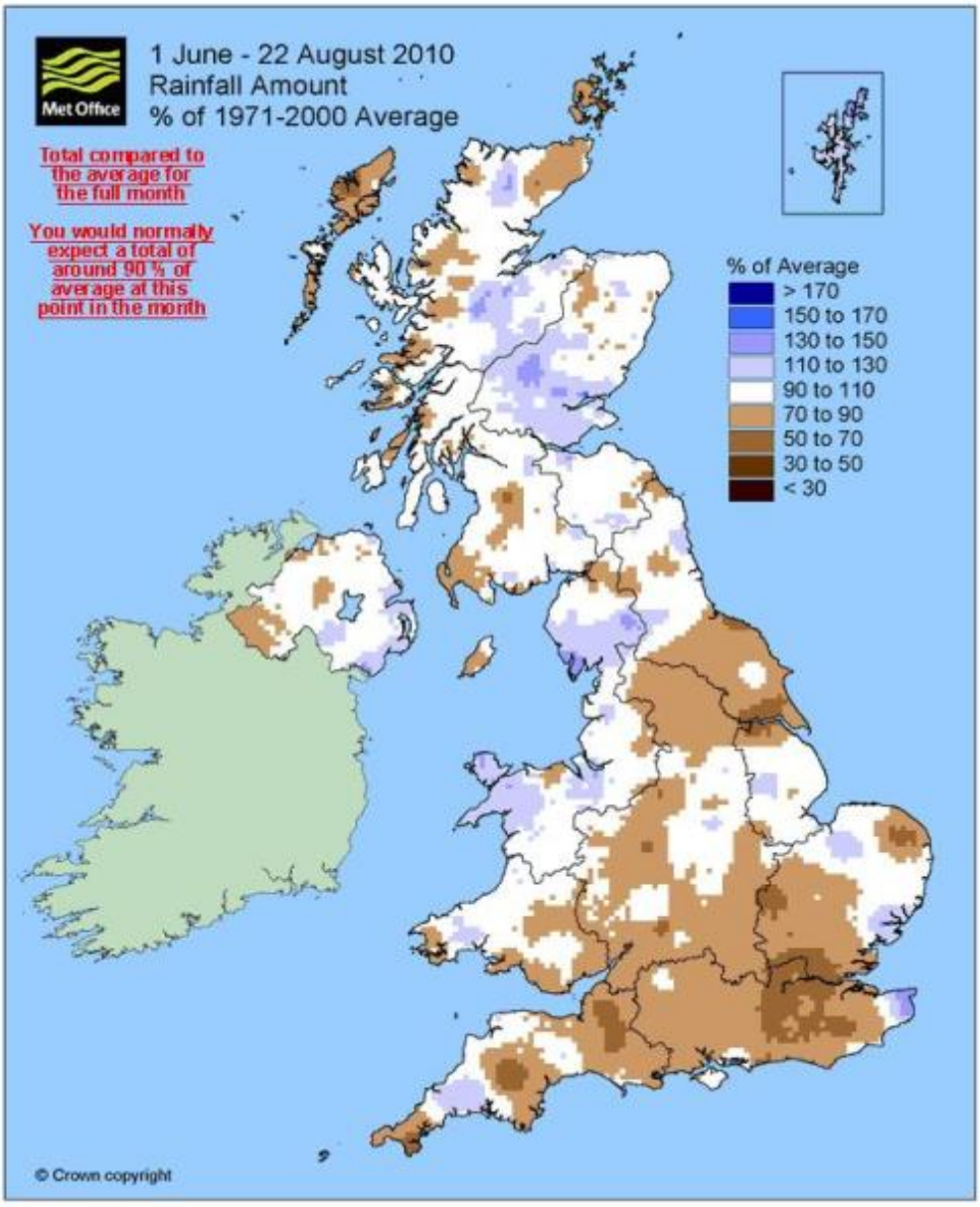
Has our summer really been a washout?

Description

We have been asked a lot in the last few days why the summer has been ‘so miserable’. Well, a look back at the summer months and the figures suggests that it hasn’t been particularly bad, and certainly no where near as wet as the last three summers.

However, it has been a summer of contrasts, starting warm and sunny and ending up rather dull and wet. June was warm, dry and sunny with the focus being on potential drought after the driest start to a year in some areas for more than 80 years. However, as we headed through July it turned very wet across the north and west of the UK, while the south and east remained dry and warm. We saw the unsettled and cloudy weather spread to all parts of the UK by the middle of August, with the south and east finally seeing spells of heavy rain.

So, the dry and warm June has been offset by the wetter cooler weather in July and August. Looking at the summer as a whole, and bearing in mind these are early, provisional figures temperatures are likely to be somewhere between 0 to 1 deg C above the long-term average while rainfall is likely to end up a little above the long-term average, however nowhere near as wet as the last three summers. So far this summer (to 22nd Aug) we have seen 219mm of rain and compared to 323mm, 320mm and 358mm going back over the previous three years.


1 June - 22 August 2010
Rainfall Amount
% of 1971-2000 Average
Met Office
Total compared to the average for the full month
You would normally expect a total of around 90 % of average at this point in the month
% of Average
> 170
150 to 170
130 to 150
110 to 130
90 to 110
70 to 90
50 to 70
30 to 50
< 30
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Map showing rainfall amount between 1 June and 22 August as a % of 1971-2000 average

Date Created
August 2010

Identified by the weather

Description

When you are travelling to foreign shores you will just have to take a look at your passport to be reminded of home, as weather now forms part of the design of the new UK passport.

The new design, available from later this year, incorporates synoptic weather maps and weather symbols along with famous landmarks from across the British Isles. These elements have all be identified as being particularly ‘British’.

The Met Office worked with the UK Passport and Border Agency in creating some of the weather maps used in the designs.

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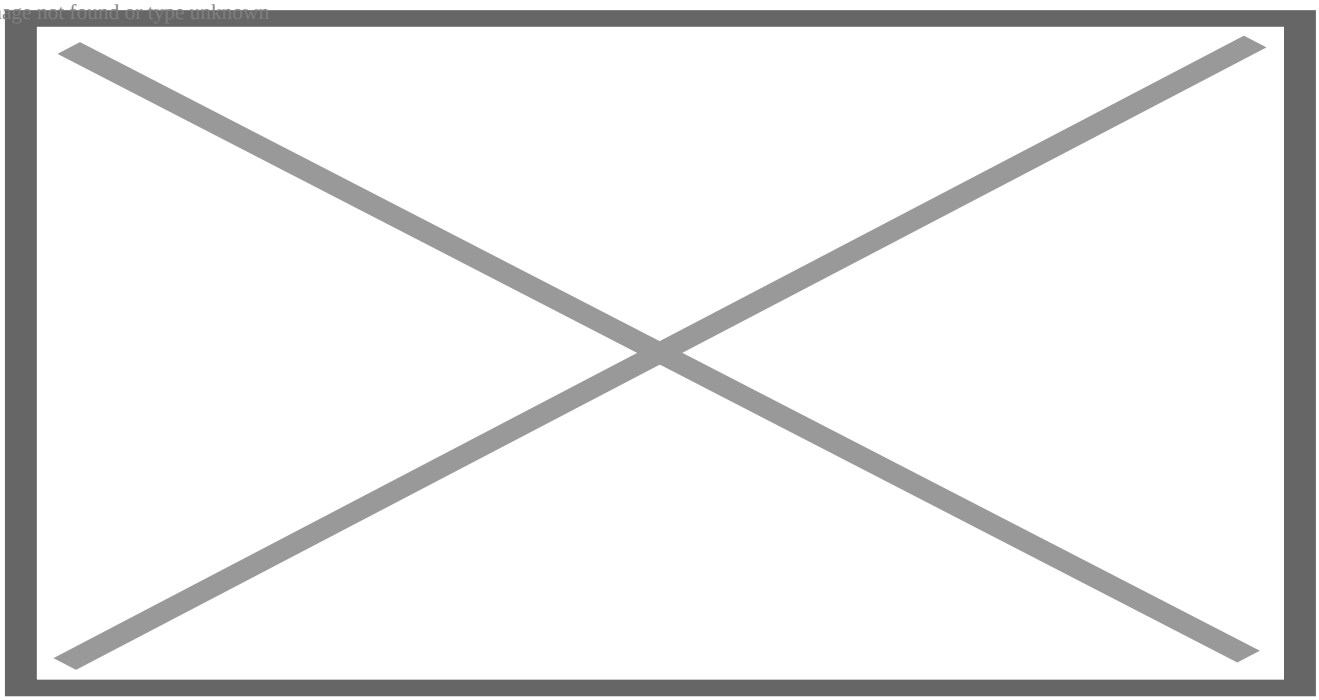


Date Created
August 2010

Met Office on Newsnight

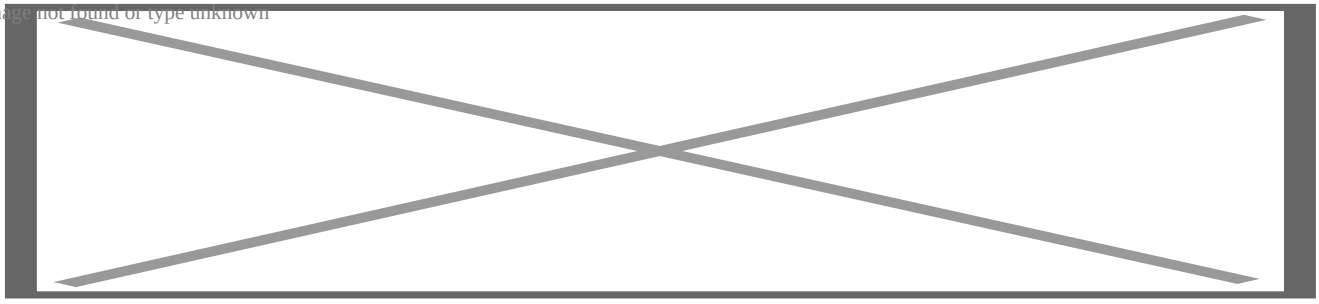
Description

On BBC Two tonight, Newsnight Science Editor Susan Watts will be examining claims by senior climate scientists that global warming is a “major contributing factor” (Dr Ghassem Asrar, director of the World Climate Research Program). As part of this Susan will be asking Met Office Chief Scientist, Prof Julia Slingo what role, if any, climate change has played in this disaster, whilst our forecasters at the BBC Weather Centre explain more behind the science of the monsoon and the developing La Nina.

Date Created
August 2010

Pakistan floods – More than just an active monsoon?

Description

Image not found or type unknown 

As the severe flooding in Pakistan appears to worsen once again our ***Chief Scientist, Professor Julia Slingo*** , investigates why there has been such severe floods in Pakistan.

Pakistan typically receives about half its annual rainfall of 250–500 mm during July and August so reports of 24-hour totals in excess of 300 mm on 29 July particularly in the head waters of the Indus River were exceptional.

Simply saying that this was part of an active Indian Monsoon season cannot alone explain the exceptional nature of the rainfall. Most summers see active spells of the Indian Monsoon where the rains spread north and west into Rajasthan, the Punjab and Pakistan. But what happened this month appears to be much more than where an active spell of the monsoon interacted with a very disturbed pattern of weather from the mid-latitudes.

Airflow
Usually during the summer, the airflow high in the atmosphere (the troposphere) over northern India, the Himalayas and Pakistan, is dominated by the monsoon anticyclone which pushes the sub-tropical jet stream to the north of the Tibetan Plateau. This prevents weather systems from reaching very far south. 2010, however, was different with the upper level airflow over the whole of Asia being very disturbed.

The results of this were record-breaking high temperatures in Moscow leading to fatalities, forest fires and damaged crops. On July 29 the temperature soared to 38.2 °C (the average high being 20 °C). That, according to Russian meteorologists is a once in a thousand year event. That same pattern affected Pakistan, with a deep trough forming downstream of the anticyclone over western Russia.

Another consequence of this disturbed weather pattern was the excessive rainfall over China, causing major mudslides and the Three Gorges Dam to almost reach its capacity of 185 m.

Pakistan floods
In Pakistan on 28/29 July this trough moved to the east and south down into northern parts of the country. The colder, unstable air aloft interacted with the warm moist air from the Indian monsoon to the south, which activated a line of intense storms along the mountains of Pakistan, feeding into the Indus River. A similar situation developed on 3 August leading to further heavy rain that hampered relief efforts.

So, it would seem that Pakistan floods were the result of a conjunction of an active Indian monsoon with an unusual weather pattern that occurred just over the mountains of western Pakistan and fed vast amounts of rainfall into the head waters of the Indus River.

Were other factors involved?

La Niña
The whole Asian Summer Monsoon system was very active and this could be attributed, in part, to the La Niña developing in the equatorial Pacific Ocean since the early summer. La Niña is the opposite phase of El Niño and is characterised by cooler than normal ocean temperatures in the central and East Pacific. The effect of this is to contain the warmest waters in the western Pacific which then drives a stronger than normal monsoon. Weather patterns circle the globe and it is possible that the disturbed nature of the pattern in August 2010 was driven by the strong monsoon — this is a process known as teleconnection.

Climate change
Another reasonable question to ask is whether global warming had any part in this extreme weather. It’s very hard to attribute any particular extreme event to climate change and, as in all cases, there is a plausible explanation for the natural variabilty of our weather and climate.

However, there is evidence from observations, especially in India and China, that periods of heavy rain are getting heavier. This is entirely consistent with our understanding of the physics of the atmosphere in which warmer air holds more moisture. Our climate change predictions support this emerging trend in observations and show a clear intensification of extreme rainfall events in a warmer world.

So, although climate change is very unlikely to have been *solely* responsible for the recent extreme weather, it is likely that climate change is loading the dice and shortening the odds of heatwaves and heavy rainfall events around the globe.

Date Created
August 2010

Met Office in the Media: 20 August 2010

Description

The sun reports today on an 'upside-down' rainbow that was seen in Derbyshire. What was actually observed is known as circumzenithal arc. In order for conditions to be right for a circumzenithal arc to form, small, flat, six-sided ice crystals must be suspended high in the sky to create a field of tiny prisms. The sun's rays enter the ice crystals and is refracted, projecting an arc in the sky which, if complete, would circle the zenith. Completely circular circumzenithal arcs are rare, however; most of them only take up a section of the sky.

Bob Ward, Policy and Communications Director at the Grantham Research Institute on Climate Change and the Environment at the London School of Economics and Political Science writes in the Guardian today about how climate sceptics mislead the public over hacked emails inquiry.

It's another weekend full of events as well with the V-Festival taking place at Hylands Park and at Weston Park. You can get forecasts for both locations through the weekend, along with information for the Edinburgh Festival from our events calendar at http://www.metoffice.gov.uk/public/pws/events/

Reuters reports on how airline experts are to assess volcano risks in Iceland in a meeting to take place in September. The meeting taking place in Keflavik will include support from the Met Office as the Volcanic Ash advisory Centre with responsibility for Icelandic Volcanoes.

Date Created
August 2010

Met Office in the Media: 16 August 2010

Description

The weekend papers continue to report on the extreme weather being experienced across the world, and the reasons behind such weather. The Observer focused on scientists meeting in Colorado this week to explore operational attribution of climate related extreme weather. This follows Dr. Peter Stott writing in The Guardian earlier last week. Climate change: how to play our hand, explored the fact that there have always been extremes of weather around the world but evidence now suggests human influence is changing the odds.

In Tom Chivers latest Blog for The Telegraph, Climate change, Pakistani floods and causality, he focuses on the causes of the Pakistani floods. In his article he expands Dr. Peter Stotts 'loaded dice' analogy which explains the idea that climate change has now made the types of extreme weather such as the Pakistani floods and Russian heatwave more likely to occur.

Date Created
August 2010

No quick fix

Description

A Met Office study has shown that our weather and climate could continue to be affected long after any reductions in greenhouse gases in the atmosphere. The latest findings published in the journal Geophysical Research Letters show that we may be committed to changes in rainfall patterns long after stabilising carbon dioxide and other gases responsible for climate change.

Date Created
August 2010

Geoengineering: the risks and rewards of tackling climate change

Description

Some would argue that geoengineering is a viable solution to climate change if the world fails to reduce carbon emissions. However, relying on artificial methods of cooling the atmosphere has potential risks and could mean that there may have to be much bigger long-term cuts in greenhouse gas emissions. As long as geoengineering is being considered, we will research the potential consequences.

Date Created
August 2010

Climate modelling in Bangladesh

Description

Climate change is likely to intensify the natural hazards that Bangladesh already faces, posing a critical challenge to development initiatives in the country. A collaborative project between UKaid from DFID, the Met Office Hadley Centre and the Bangladesh University of Engineering and Technology (BUET) has increased Bangladesh's capacity to apply regional climate change models, interpret outputs from those models and help policymakers plan for climate change.

Date Created
August 2010

Summer forecasting and the importance of local effects

Description

Following on from our Chief Meteorologist explaining a little about why it is more challenging to predict the weather in summer, I have asked Ewen McCallum to explain the science of summer forecasting and the importance of local effects:

> Do you ever wonder why the weather can change so much from place to place, especially in summer. Well its all down to a complex word called ‘topography’. That’s just a fancy word for the shape of the land and sea that you see when you fly across the country in an aircraft. In fact a lot of the weather we experience is because of the shapes of the hills, valleys, coasts and rivers and how the air flows around them.
>
> In summer the large scale lows and weather fronts of winter are often absent and so local variations in temperature and moisture often dictate what the weather will be. To complicate matters in the UK the atmosphere is often in a finely balanced situation such that if the air ascends it will keep going up until it cools and forms shower clouds. So showers often form over hills as the air is forced to rise over them. Also at the coasts we often witness a cooling breeze as the land heats up and rises drawing in cooler air to replace it from the sea. Now as this air rises inland if conditions are right showers can form. Often they form into lines and so some people can get a soaking from one shower after another whilst other people at the coast wonder what all the fuss is about.
>
> It is not just showers that are affected by ‘topography’. Low cloud often sits on the upwind side of a hill or on top of the hill but if you drive to the lee of the high ground it could be bright and sunny. If you are sitting on the beach with fog rolling in off the sea go inland where the sun will heat the land and burn the fog away.
>
> So understanding your local topography and which way the wind is blowing will help you add value to the national weather forecast and could make your holiday more successful.

Date Created
August 2010